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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/698,134

10/31/2003

Raymond M. Genick II

0275M-000651

2908

27572 7590 01/16/2007
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EXAMINER

MCCREARY, LEONARD

ART UNIT

PAPER NUMBER

3616

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

01/16/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/698,134

Applicant(s)

GENICK, RAYMOND M.

Examiner

Leonard J. McCreary, Jr.

Art Unit

3616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 November 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 April 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. 6,669,421 to Hofschneider in view of U.S. 4,650,208 to Mason, and further in view of US 5,580,201 to Brilmyer. Hofschneider discloses a Connecting Element with Eccentric Disks comprising:

- a threaded fastener 1 defining a pair of longitudinal channels 18, 20, each channel defining a generally flat bearing surface and a concave curved portion (Figures 1-3, 6) (Figure A below) (col 4, lin 3-5)

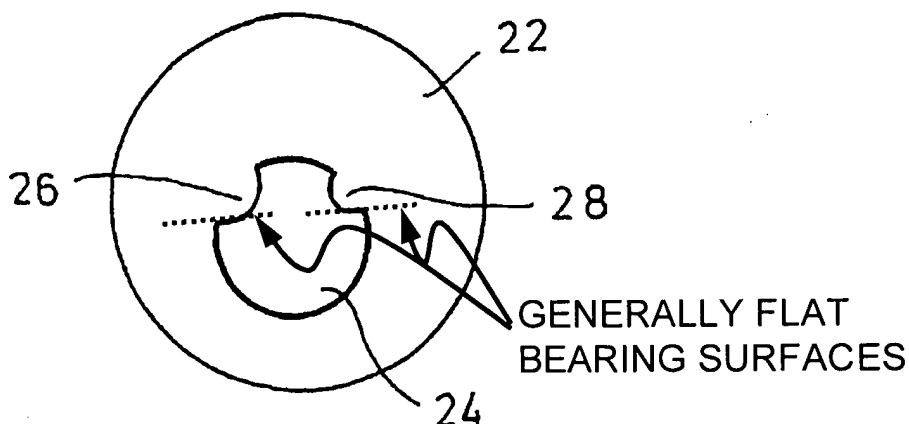


Figure A.

- a non-threaded portion 10, 12 of the fastener 1
- a first cam plate 8 non-rotatably coupled to the non-threaded portion 10 of the threaded fastener 1
- a second cam plate 22 Figure 3 defining an aperture non-rotatably mated to the pair of longitudinal channels 18, 20
- the rotational position of the first and second cam plates with respect to each other is fixed (col 1, lin 36-40) (col 2, lin 5-7)

Hofschneider does not teach that either of the cam plates includes an arcuate slot.

Mason teaches the use of

- a cam plate with an arcuate slot in conjunction with an automobile suspension, the slot facilitating alignment adjustment (col 2, line 65 – col 3, line 2.)

It would have been obvious at the time of the invention to one of ordinary skill in the art to modify Hofschneider in view of the teachings of Mason to incorporate one or more slotted cams, so as to facilitate alignment (claims 1, 2, 15, 16.)

Hofschneider does not teach the first cam plate 8 is mated to the threaded fastener 10 using a knurled portion. Brilmyer teaches:

- a threaded faster with a knurl portion 48 configured to mate with the first cam plate (claims 1, 4, 15, 18.)

It would have been obvious to one of ordinary skill in the art to modify the cam bolt assembly of Hofschneider in view of the teachings of Brilmyer to accept and retain a

cam using an interference fit of a knurled portion of the fastener since this was well-known manufacturing process at the time of invention, and so as to provide a secure connection.

Hofschneider teaches a cam bolt assembly with a T-shaped cross section 1

Figure 2 (claims 3, 17.)

Hofschneider teaches a longitudinal channel defining a pair of bearing surfaces

Figure 2 (claims 5, 19.)

Hofscheider teaches longitudinal channels 16, 18 are defined through fastener 1 threads 14 into the fastener core Figure 2 (claim 12.)

Hofscheider teaches a fastener comprising a shoulder portion 10 (claim 13.)

It would have been an obvious design choice to one skilled in the art at the time of invention that a cam bolt assembly used in such a suspension application should be configured to withstand a torque of 150N-m in order to avoid undue component deflection or failure (claim 6.)

It would have been an obvious design choice to one skilled in the art at the time of invention to manufacture a cam bolt assembly to the dimensions set forth in claims 7-11 in order to accommodate specific suspension structure and as utilizing such dimensions is within the level of skill of one in the art.

It would have been an obvious design choice to one skilled in the art at the time of invention to use a threaded fastener within the strength class of 10.9 or better in order to increase the strength of the assembly without increasing the physical size or weight of the assembly (claims 14, 20.)

Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hofschneider in view of U.S. 4,650,208 to Mason, and further in view of US 5,580,201 to Brilmyer as applied to claim 15 above, and further in view of U.S. 6,113,299 to Reichelt. Hofschneider does not teach the longitudinal channels may be partially defined by the non-threaded portion 12, 10 of the fastener 1. Reichelt teaches a threaded fastener with longitudinal channels that are

- partially defined by the non-threaded portion of the fastener.

It would have been obvious to one of ordinary skill in the art at the time of invention to extend the longitudinal channels of Hofschneider into the non-threaded portion of the fastener in view of the teachings of Reichelt in order to maintain a greater cross sectional area in the region of the cam and thus increase the strength of the fastener (claim 21.)

Response to Arguments

1. Applicant's arguments filed 20 November 2006 have been fully considered but they are not persuasive.
2. Applicant argues the plate shown in the Mason reference is not non-rotatably coupled to the bolt. Examiner notes that the rejection stands, because primary reference Hofschneider discloses that the first cam plate 8 is non-rotatably coupled to the bolt; Mason is relied upon for the arcuate slot only.


3. Applicant argues it is not obvious to one skilled in the art that the threaded fastener assembly should be configured to withstand a torque of 150N-m. Examiner disagrees and notes that 150N-m is not an abnormally large torque – especially for a highly-stressed suspension component – and therefore it would be obvious to design the assembly to withstand such a torque based upon the installed location within the suspension system, the size of the suspension system, the intended vertical and cornering loads expected during intended use, and other similarly common suspension design considerations.
4. Applicant argues none of the references disclose a fastener having channels defining a generally flat portion and a concave curved portion. Examiner disagrees and draws reference to Figure A of this Action, which is annotated Fig 3 of Hofschneider showing generally flat bearing surfaces and concave curved surfaces associated with the channels. Examiner also draws attention to Hofschneider Fig 6, which more clearly shows a flat portion and a concave portion of the slot, and notes Hofschneider discloses that individual features of the various exemplary embodiments may be used in any combination (col 4, lin 3-5).


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leonard J. McCreary, Jr. whose telephone number is 571-272-8766. The examiner can normally be reached on 0700-1700 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Dickson can be reached on 571-272-6669. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Leonard J. McCreary, Jr.
Examiner
Art Unit 3616


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